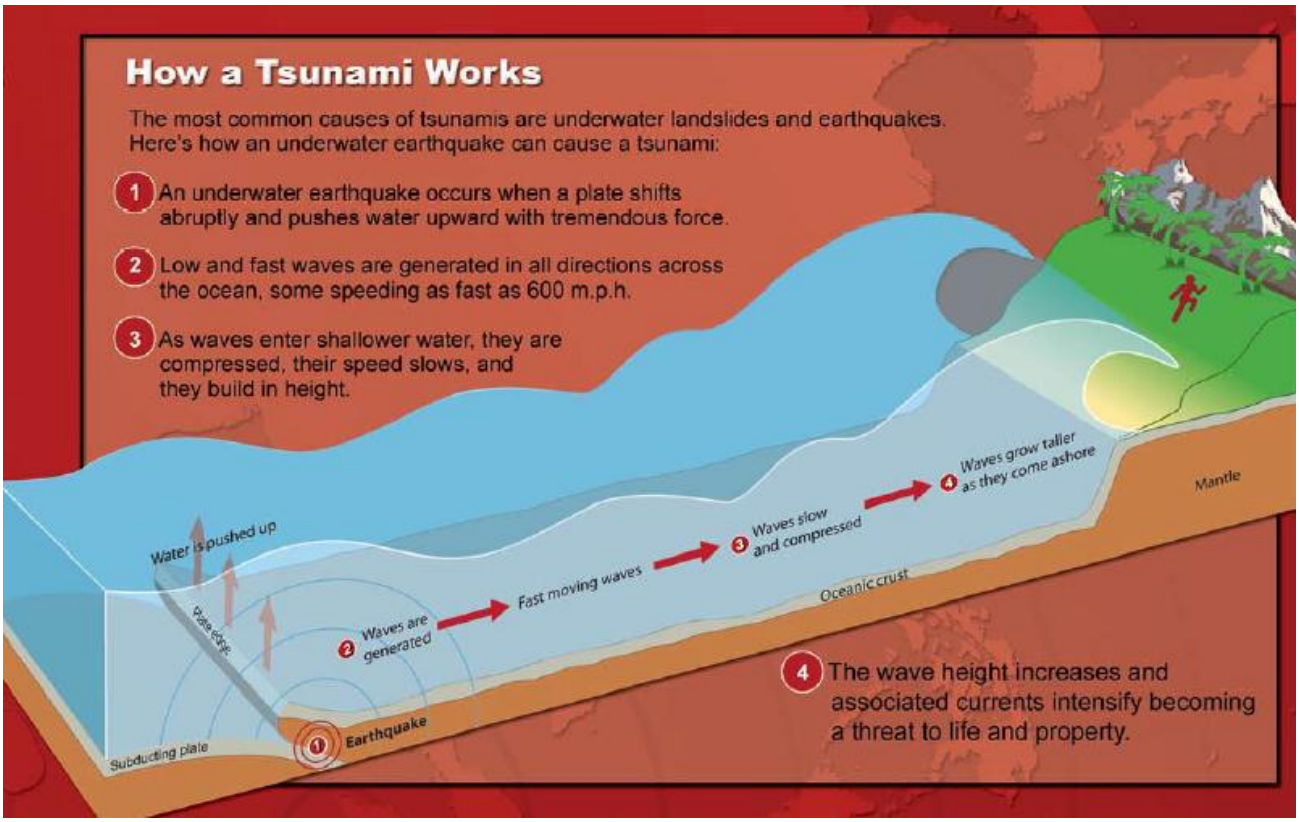
NOAA - National Weather Service
Tampa Bay Area
2525 14th Avenue SE, Ruskin, Florida 33570
813-645-2323 http://weather.gov/tampa

The Tsunami: Are we at risk in west-central and southwest Florida?

[En Español]

Given the recent tragic events in Japan, it is important to discuss the potential impacts from earthquakes and tsunamis along the Florida Gulf coast. A tsunami is a series of waves with a long wavelength and period (time between crests) generated by a large, impulsive displacement of water. The most common cause of this is sea floor uplift associated with a devastating earthquake. However, a tsunami can also be triggered by landslides into or under the water surface. Additionally, tsunamis can be generated by volcanic activity and meteorite impacts.



Source: NWS TsunamiReady website

Due to a variety of geological features, earthquakes are relatively rare in Florida; as such the risk for a tsunami is rather low. However, earthquakes have occurred in the past and could potentially happen again. The strongest earthquake in Florida's history occurred near St. Augustine on January 12, 1879. A description of the impact from this quake is shown below: *(Courtesy: United States Geological Society, USGS)*

> *Plaster was shaken down and articles were thrown from shelves at St. Augustine and, to the south, at Daytona Beach. At Tampa, a trembling motion was preceded by a rumbling sound. Felt from a line joining Tallahassee, Florida, to Savannah, Georgia, on the north to a line joining Punta Rassa and Daytona Beach, Florida, on the south. Two shocks occurred, each lasting 30 seconds.*

Contact: Andrew McKaughan ***Date: March 11, 2011***

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The occurrence of earthquakes is more common in the Gulf of Mexico compared to Florida, but is still infrequent. On September 10, 2006, a magnitude 5.8 earthquake occurred in the Gulf of Mexico 251 miles southwest of Anna Maria, FL and was felt throughout west central and southwest Florida. However, the magnitude of the quake was not strong enough to create a tsunami along the Gulf Coast. Typically, devastating tsunamis occur in subduction zones, areas where one tectonic plate is forced under another and following very powerful earthquakes (magnitude 7.0 or greater). Japan is located in one of the planet's most active subduction zones and is no stranger to earthquakes and tsunamis. Fortunately, there are no major subduction zones in the Gulf of Mexico which greatly reduces the risk for catastrophic tsunamis as seen in Japan. Since records began, tsunami waves recorded along the Gulf Coast have all been less than 1 meter (3.28 feet) high.

For more tsunami information, please visit the links below from NOAA's National Weather Service:

Frequently Asked Questions on Tsunamis

TsunamiReady

The Pacific Tsunami Warning Center

West Coast and Alaska Tsunami Warning Center

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